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Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Friction – Home Lab**

**Type your 7-sentence background paragraph and staple it to the front of this lab. Complete parts 1 -5. Do the lab. Complete 6-8.**

**Problem: to find the effect of friction on the motion of an object  
  
Lab Proposal:**

1. **IV:** (\_\_\_/2)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Levels:** (\_\_\_/1)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. **DV:** (\_\_\_/2)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Constants**: (\_\_\_/2)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
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2. **Hypothesis:** (\_\_\_/4)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
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**Materials:**

* One object that rolls (could be a marble OR toy car)
* Stopwatch or watch with a second hand
* 3 different surfaces (ex. floor, carpet, sidewalk)
* Ruler with centimeters

**Procedure**:

* 1. Measure out a 20 cm path on the first surface.
  2. Place the object on the starting line.
  3. Push the object.
  4. Time how long it takes the object to go 20 cm.
  5. Repeat steps 2-4 twice more.
  6. Repeat steps 1-5 for each surface.

**6. Data Table:** (\_\_\_/6)

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**7. Graph:** (averages only) (\_\_\_/6)

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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S T U P Y X

**8. Conclusion** (complete sentences)

1. What was the purpose of this experiment? (\_\_\_/1)

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1. Summarize the results for each IV level. (Include the averages. Write in full sentences.) (\_\_\_/3)

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1. Use the averages to explain whether the hypothesis was supported or refuted. USE NUMBERS! (\_\_\_/2)  
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2. If one change could be made to one part of the experiment to make it better, what would the change be?  
   NOTE: Do NOT use “increase number of trials” or “add levels of IV”! (\_\_\_/1)

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1. Who in the real world would be interested in the results of this experiment? (\_\_\_/1)

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1. Why would the results of this experiment be important to them? (\_\_\_/1)

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